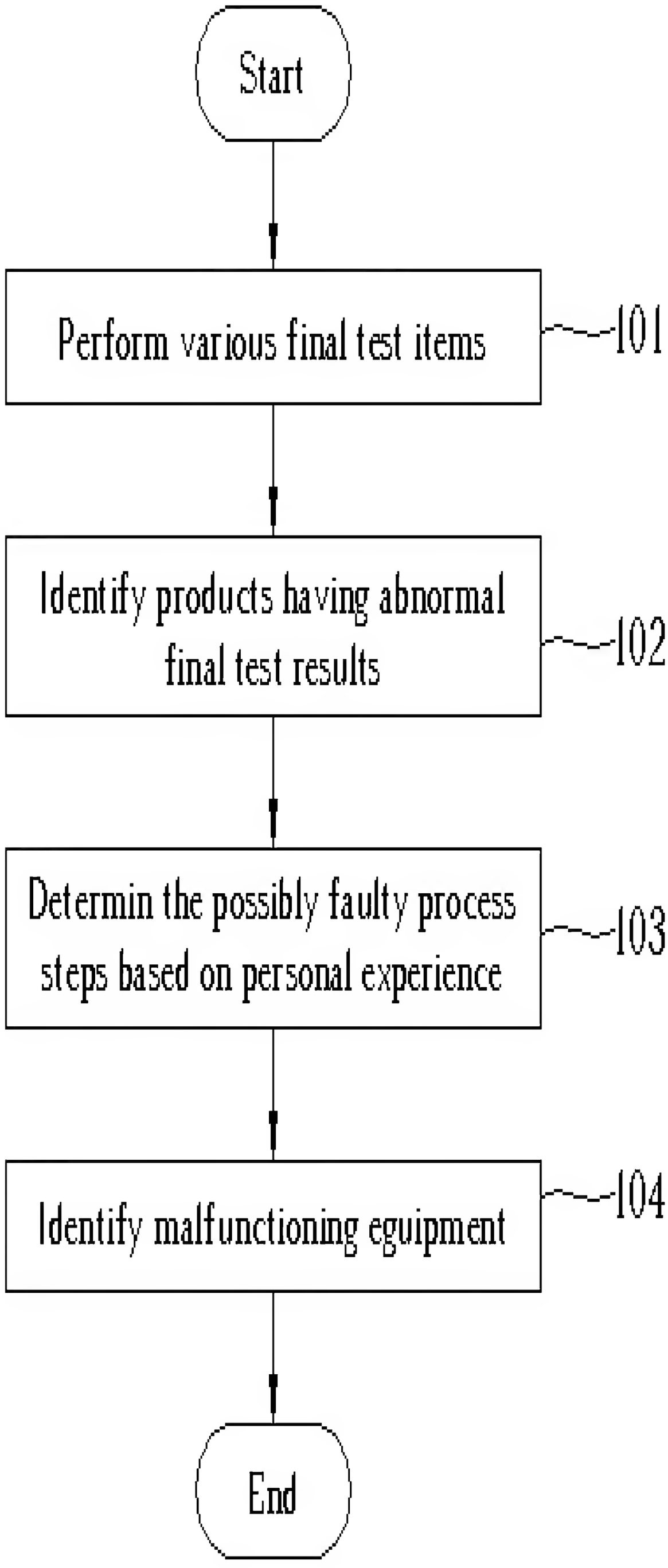

Fig. 1 Prior art

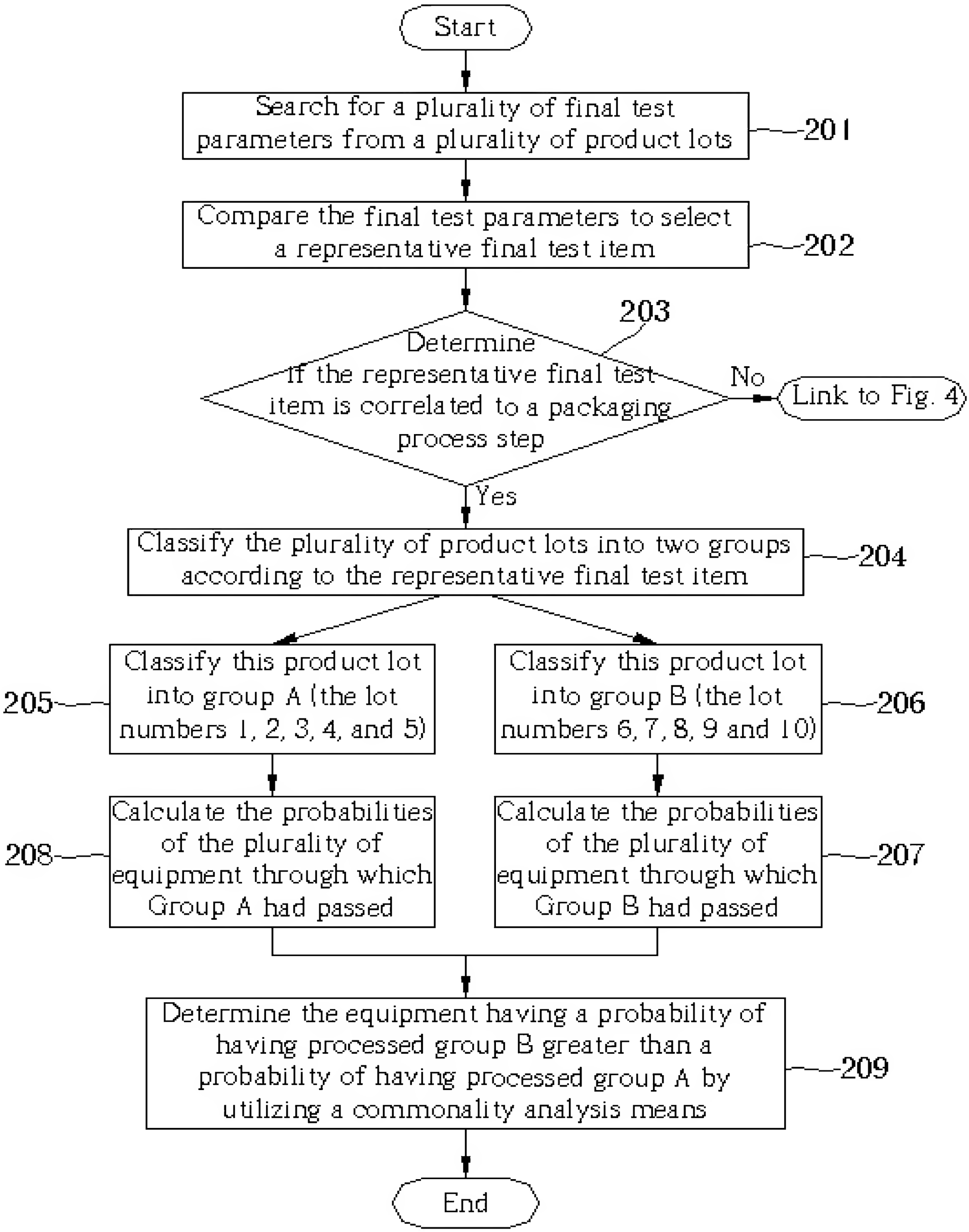
Start
Search for a plurality of final test parameters from a plurality of product lots
201
Compare the final test parameters to select a representative final test item
202
203
Determine If the representative final test item is correlated to a packaging process step
No
Link to Fig. 4
Yes
Classify the plurality of product lots into two groups according to the representative final test item
204
205
Classify this product lot into group A (the lot numbers 1, 2, 3, 4, and 5)
Classify this product lot into group B (the lot numbers 6, 7, 8, 9 and 10)
206
208
Calculate the probabilities of the plurality of equipment through which Group A had passed
Calculate the probabilities of the plurality of equipment through which Group B had passed
207
Determine the equipment having a probability of having processed group B greater than a probability of having processed group A by utilizing a commonality analysis means
209
End

Fig. 2

Lot Number	Item A	Item B	Item C
Lot 1	20%	5%	6%
Lot 2	19%	7%	9%
Lot 3	23%	5%	7%
⋮	⋮	⋮	⋮
Lot n	22%	6%	8%
Average	22%	6%	7%

Fig. 3

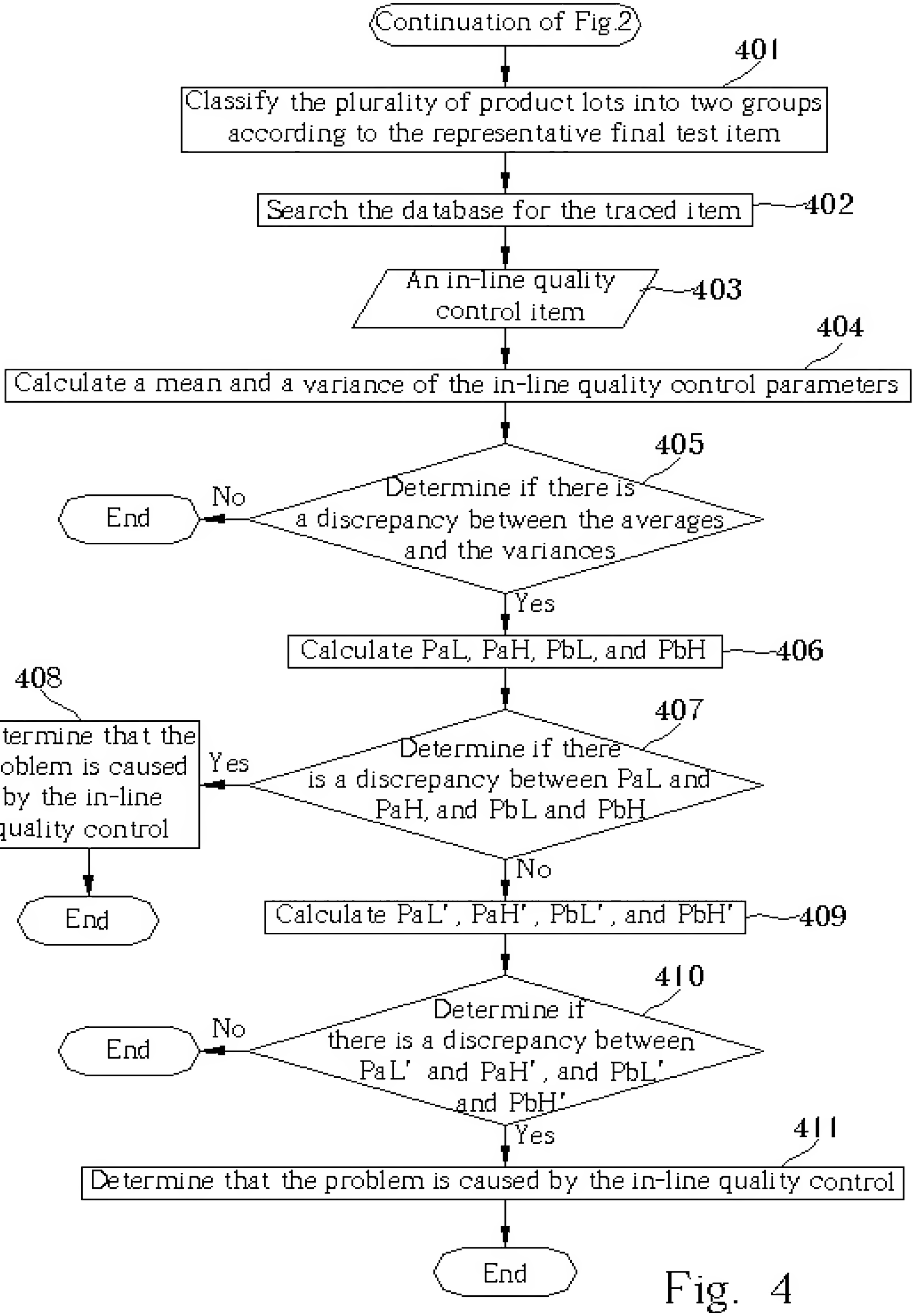
Continuation of Fig.2
401
Classify the plurality of product lots into two groups according to the representative final test item
Search the database for the traced item
402
An in-line quality control item
403
404
Calculate a mean and a variance of the in-line quality control parameters
405
Determine if there is a discrepancy between the averages and the variances
No
End
Yes
Calculate PaL, PaH, PbL, and PbH
406
408
Determine that the problem is caused by the in-line quality control
End
Yes
407
Determine if there is a discrepancy between PaL and PaH, and PbL and PbH
No
Calculate PaL', PaH', PbL', and PbH'
409
410
Determine if there is a discrepancy between PaL' and PaH', and PbL' and PbH'
No
End
Yes
411
Determine that the problem is caused by the in-line quality control
End

Fig. 4